



Brittany C. Huntington, B.S., M.S.
Department of Justice
Drug Enforcement Administration
Office of Forensic Science

Senior Forensic Chemist
Western Regional Laboratory
Pleasanton, CA

AREA OF EXPERTISE

Forensic Discipline

Seized Drug Analysis

Expert Testimony

- Testified 25 times
- Testimonies in the last four years:
 - 2021, (video testimony for Denver, CO), *United States v. Pappas*
 - 2021, (Seattle, WA), *United States v. Woolard*
 - 2021, (Anchorage, AK), *United States v. Alvarez*
 - 2019, (Denver, CO), *United States v. Nolan*

PROFESSIONAL EXPERIENCE

DRUG ENFORCEMENT ADMINISTRATION

FORENSIC CHEMIST, Western Laboratory, (Pleasanton, CA), 2009-present

- Main duties include the analysis of submitted evidence for the presence or absence of controlled substances
- Have analyzed approximately 3325 exhibits (approximately 1400 methamphetamine identifications, 415 cocaine identifications, 500 heroin identifications, 325 marijuana and related substances identifications, and 200 fentanyl and related substances identifications)
- Maintained instrumentation utilized in evidence analysis as Instrument Specialist from 2017-2018
- Assist in the training of our new chemists as one of the in-house Training Officers, 2019-2021

Training

- Drug Enforcement Administration (DEA) Western Laboratory, Forensic Chemist Training Program, (San Francisco, CA), 2009
- DEA Western Laboratory, Infrared Properties, (San Francisco, CA) 2009
- DEA Office of Forensic Science, Basic Forensic Science School, (Quantico, VA), 2010
- DEA Office of Training, Basic Clandestine Laboratory Certification School, (Quantico, VA) 2010
- Agilent Technologies, Gas Chromatograph Maintenance Training, (Alpharetta, GA) 2010
- Waters, High Performance Liquid Chromatography Training, (San Francisco, CA) 2010
- DEA Western Laboratory, Clandestine Phenethylamine Laboratory Analytical and Syntheses Training, (San Francisco) 2010
- DEA Office of Training, Portable Raman Training, (San Francisco, CA) 2011
- Network Environmental Systems, Clan Labs of Concern: Beyond Meth, (Folsom, CA) 2011
- Jason Nawyn, Synthetic Cannabinoids/Substituted Cathinones, (San Francisco, CA) 2011
- DEA Office of Training, DEA Level "A" Certification Course, (Valencia, CA) 2011
- DEA Special Testing Laboratory, Nuclear Magnetic Resonance Training, (San Francisco, CA) 2012
- DEA Special Testing Laboratory, Methamphetamine/Meth Profiling Program Training, (San Francisco, CA) 2012
- California Association of Criminalists (CAC), Measurement Assurance Panel, (Hayward, CA) 2012

- CAC, Narcotic Trafficking in Northern California, (Hayward, CA) 2012
- Agilent Technologies, Controlled Substances Analysis, (San Francisco, CA) 2014
- Agilent Technologies, Low Thermal Mass (LTM) Capabilities, (San Francisco, CA) 2014
- Oklahoma State University Center for Health Sciences, School of Forensic Sciences, Center for Improvised Explosives; WMD Laboratory Recognition for Forensic Scientists; (San Francisco, CA) 2014
- Dean A. Kirby, Field Report: The Manufacture of Cannabis Concentrates, (Pleasanton, CA) 2015
- DEA Office of Training; Instructor Development Course (Quantico, VA) 2015
- Clandestine Laboratory Investigating Chemists (CLIC), Improvised Explosives and Methamphetamine One-Pot Remediation, (Oklahoma City, OK) 2015
- Agilent, LTM Theory and Operational Concepts, (Pleasanton, CA) 2016
- DEA Special Testing Laboratory, LTM Method Development, (Pleasanton, CA) 2016
- DEA Office of Forensic Sciences, Lean Six Sigma Training and Implementation, (Pleasanton, CA) 2018
- DEA Office of Training, Aspiring Leaders Conference, (Quantico, VA) 2018
- DEA Office of Training, Field Training Chemist Course, (Quantico, VA) 2019
- CAC, Cannabis Workshop, (Oakland, CA) 2019
- CAC, ANAB Risk-Based Thinking Workshop, (Oakland, CA) 2019
- DEA Office of Training, Structured Interview Panel, (Quantico, VA) 2022

SACRAMENTO DISTRICT ATTORNEY'S LABORATORY OF FORENSIC SERVICES

CONTROLLED SUBSTANCES INTERN, Controlled Substances Section, (Sacramento, CA) 2008-2009

- Learned how to conduct drug analysis utilizing color tests, microcrystalline tests. Infrared spectrometry, and gas chromatography-mass spectrometry
- Conducted thesis research of synthesizing and analyzing the hallucinogen bromo-dragonfly
- Assisted thesis supervisor with numerous methamphetamine cooks for local classes

Training

- California Criminalistics Institute (CCI), Basic Practical Microscopy, (Sacramento, CA) 2008

UNIVERSITY OF CALIFORNIA, DAVIS

TEACHER'S ASSISTANT, Department of Environmental Toxicology: Introduction to Forensic Science, (Davis, CA) 2008

- Built lesson plans/PowerPoint presentations summarizing the topics covered in class each week, which I would then present to the students one night each week
- Held additional office hours each week to assist students with understanding core concepts
- Developed homework assignments, paper topics, and test questions, and graded all of these assignments

TEACHER'S ASSISTANT, Forensic Science Graduate Group: Personal Identification Methods, (Davis, CA) 2008

- Held office hours each week to assist students with understanding core concepts
- Developed homework assignments, paper topics, and test questions, and graded all of these assignments

SOUTH LAKE TAHOE POLICE DEPARTMENT

EVIDENCE TECHNICIAN INTERN, Evidence Technician Section, (South Lake Tahoe, CA) 2006

- Main duties included handling, processing, and storing evidence, as well as crime scene investigation

NORTHEASTERN UNIVERSITY

UNDERGRADUATE RESEARCHER, Department of Chemistry & Chemical Biology/Barnett Institute, (Boston, MA) 2006-2007

- Assisted in the Dana-Farber Joint Program in Cancer Drug Discovery
- Derivatized urine samples from male cancer patients and analyzed by liquid chromatography

LABORATORY ASSISTANT, Department of Chemistry & Chemical Biology, (Boston, MA) 2003-2007

- Assisted with the set-up and teaching of all undergraduate organic chemistry lab classes
- Contributed with the development of new experiments for the classes
- Assisted with the ordering and stocking of chemicals and glassware

EDUCATION AND CERTIFICATIONS

Northeastern University (Boston, MA)

- Bachelor of Science (B.S.) degree in Chemistry, minor in Criminal Justice; 2007

University of California at Davis (Davis, CA)

- Master of Science (M.S.) degree in Forensic Science; 2009

Certifications

- DEA Clandestine Laboratory Investigation (2010 to present)
- DEA Advanced Site Safety (2015 to present)
- DEA Field Training Chemist (2019-present)
- DEA Structured Interview Panel, Core Series (2022-present)

PRESENTATIONS AND LECTURES

- Presenter, Mentoring Across the Curriculum: The Co-op Advantage
 - 231st American Chemical Society (ACS) National Meeting, (Atlanta, GA) 2006
- Contributor, Quantitation of Estrogens in Male Plasma Using Liquid Chromatography with an Electrochemical Detector
 - 233rd ACS National Meeting, (Chicago, IL) 2007
- Instructor, "Hands –on" manufacturing of methamphetamine
 - Multiple CCI Clandestine Laboratory Analysis and Synthesis classes, (Sacramento, CA) 2008-2009
- Presenter; Synthesis and Intermediate/By-Product Analysis of Bromo-dragonfly, a Dihydrobenzofuran Analogue of Phenethylamine Hallucinogens
 - CAC Semi-Annual Seminar, (Sacramento, CA) 2011
- Instructor, "Hands –on" manufacturing of methamphetamine
 - DEA Basic Clandestine Laboratory Safety Course #52, (Quantico, VA) 2011
- Instructor, Analysis of Multi-Unit Exhibits
 - San Francisco Assistant United States Attorney (AUSA) Training, (San Francisco, CA) 2012
- Instructor, "Hands –on" manufacturing of methamphetamine
 - National Guard Clandestine Laboratory Certification School, (Meridian, ID) 2012
- Presenter, Optimizing the Analysis of Synthetics
 - CAC Drug Study Group, (Richmond, CA) 2014
- Instructor, "Hands –on" manufacturing of methamphetamine

- Department of Justice (DOJ) Basic Clan Lab Certification Course, (Santa Rosa, CA) 2014
- Presenter, Synthetic Cannabinoids and Cathinones: A Case Study from Seizure to Trial
 - CAC Semi-Annual Seminar, (Rohnert Park, CA) 2014
 - Los Angeles County Department of Medical Examiner-Coroner's West Coast Conference, (North Hollywood, CA) 2015
 - CLIC's 25th Annual Technical Training Seminar, (Oklahoma City, OK) 2015
- Co-Presenter, Cannabis Extracts
 - DEA Agent Clandestine Laboratory Recertification, (Pleasanton, CA) 2015
- Presenter, Gas Chromatography-Mass Spectrometry Limits of Detection and Best Practices
 - DEA Western Laboratory Brown Bag Lunch, (Pleasanton, CA) 2016
- Co-Presenter, Annual Clandestine Laboratory Recertification
 - Seattle Field Division Recertification, (Seattle, WA) 2017
- Presenter, Basic Drug Identification
 - DEA/Rocky Mountain High Intensity Drug Trafficking Area (RMHIDTA) Basic Drug Investigations, (West Valley City, UT) 2017
- Presenter, Annual Clandestine Laboratory Recertification
 - Billings Resident Office Recertification, (Billings, MT) 2017
- Presenter, Fentanyl and High Hazard Compounds
 - Salt Lake Valley HazMat Committee Training, (Sandy, UT) 2018
- Instructor, Level A Clandestine Laboratory Investigations
 - DEA High Hazard Clandestine Laboratory Certification, (Valencia, CA) 2018
- Instructor, Gas Chromatography-Mass Spectrometry Subject Matter Expert
 - DEA Basic Forensic Chemist Course, (Quantico, VA) 2020
- Instructor, Intro to HazMat at Clan Labs
 - San Jose Fire Department Hazardous Materials Training, (San Jose, CA) 2020
 - Salt Lake City National Guard Hazardous Materials Training, (Salt Lake City, UT) 2020
- Instructor, Field Test Training
 - Various federal, state, and local law enforcement trainings, 7 classes total, 2009-present

PUBLICATIONS

- "Supercritical Fluid Extraction of Cannabis." Journal Clandestine Laboratory Investigating Chemists Association, Volume 26, Number 2, April 2016, pp. 21-24



U.S. Department of Justice
Drug Enforcement Administration
Western Laboratory
6880 Koll Center Parkway
Pleasanton, CA 94566

www.dea.gov

TO: Jennifer Clark
Assistant U. S. Attorney

FROM: Brittany C. Huntington
Senior Forensic Chemist
DEA Western Laboratory

SUBJECT: RULE 16(a)(1)(G) SUMMARY OF TESTIMONY IN
UNITED STATES v. Justin Jose Romo
DEA LIMS Case Number(s): 2022-SFL7-04530, 2022-SFL7-04531

Date: March 9, 2023

The following summary of testimony is provided as required by Federal Rule of Criminal Procedure 16(a)(1)(G) and is a complete statement of my opinions, which are exclusive to and address only the exhibit(s) identified in this summary:

1. My name is: Brittany C. Huntington
2. I am employed by the U.S. Department of Justice, Drug Enforcement Administration (DEA), in the capacity of Senior Forensic Chemist, and was so employed when I conducted the examinations and analyses described below. My qualifications to conduct the examinations and analyses, and to express an opinion as to the identity of the material contained in the exhibit(s) described below, are based on my knowledge, skill, experience, training, and education. See my attached Curriculum Vitae for additional information regarding my qualifications, including previous testimony offered in the last four years and any publications authored in the last ten years.
3. The opinions described below are based on the following chemical, physical, and instrumental analyses, the results generated by those analyses, and my interpretation of those results set forth in the forthcoming Laboratory Report and analyst notes.

SUBJECT: RULE 16(a)(1)(G) SUMMARY OF TESTIMONY IN
UNITED STATES v. Justin Jose Romo
DEA LIMS CASE NUMBER(S): 2022-SFL7-04530, 2022-SFL7-04531

The manner and process by which I performed the analyses were, to the best of my knowledge, in accordance with the publicly available Analysis of Drugs Manual (ADM) and Laboratory Operations Manual (LOM), in effect at the time of analysis. These are generally available at:

https://www.dea.gov/resources/documents?f%5B0%5D=publication_type%3A2596, or were otherwise disclosed upon request.

4. I analyzed the material contained in the exhibits which were submitted for analysis in the above referenced case number(s). My conclusions are included as part of forthcoming forensic laboratory reports and analyst notes.
5. The material referred to herein as exhibit #2022-SFL7-04530, as represented in the forensic laboratory reports and accompanying case file, has been identified as follows:
 - a. Substances identified: methamphetamine hydrochloride*
 - b. Net weight: 86.5 g \pm 0.2 g **
 - c. Purity of methamphetamine hydrochloride: 100% \pm 6%***
 - d. All units were selected for qualitative analysis.

The above opinion is based on the following physical, chemical, and instrumental analyses:

- i. Gas Chromatography/Mass Spectrometry
- ii. Infrared Spectroscopy
- iii. UV-Vis Spectroscopy

6. The material referred to herein as exhibit #2022-SFL7-04531, as represented in the forensic laboratory reports and accompanying case file, has been identified as follows:
 - a. Substances identified: fentanyl, acetaminophen*
 - b. Net weight: 103.333 g \pm 0.003 g **
 - c. Purity of fentanyl (calculated as hydrochloride): 2.6% \pm 0.6%***
 - d. A statistical sampling approach based on the probability theory of the hypergeometric distribution was used.

The above opinion is based on the following physical, chemical, and instrumental analyses:

- i. Gas Chromatography/Mass Spectrometry
- ii. Immunoassay Test
- iii. Gas Chromatography

SUBJECT: RULE 16(a)(1)(G) SUMMARY OF TESTIMONY IN
UNITED STATES v. Justin Jose Romo
DEA LIMS CASE NUMBER(S): 2022-SFL7-04530, 2022-SFL7-04531

The analytical methods used in the above analyses are validated and verified according to our quality assurance policy to ensure the methods are reliable and fit-for-purpose and the techniques utilized are widely accepted and employed in the scientific and forensic community. Summaries of instrumental methods are available at:

https://www.dea.gov/resources/documents?f%5B0%5D=publication_type%3A2596

- *A composite was formed from 1 unit for testing of 1 unit received. Methamphetamine identified in the composite. Salt form determined from testing the composite.
- **The net weight was determined by direct weighing of all units. The net weight uncertainty value represents an expanded uncertainty estimate at the 95% level of confidence.
- ***Purity determined from testing the composite; the purity and amount pure substance values are representative of the entire exhibit. All uncertainty values represent expanded uncertainty estimates at the 95% level of confidence.

7. This report, its attachments, and the referenced documents are not an exhaustive or complete recitation of testimony that I may offer. In addition, I may offer opinions in response to questions posed during trial.

Pursuant to Fed. R. Crim. P. 16(a)(1)(G)(v), I approve the foregoing disclosure.

BRITTANY
HUNTINGTON

Digitally signed by BRITTANY
HUNTINGTON

Date: 2023.03.09 10:58:07 -08'00'

Date: 3/9/2023

Brittany C. Huntington, DEA Senior Forensic Chemist

APPROVED: _____

PAUL KUSKO

Digitally signed by PAUL KUSKO
Date: 2023.03.14 20:21:37
-07'00'

P. Steven Kusko, Supervisory Chemist

Attachment



**U.S. Department of Justice
Drug Enforcement Administration**

Western Laboratory
Pleasanton, CA

Chemical Analysis Report

HSI - Kalispell
2 Main Street, Suite 206
Kalispell, MT 59901

Case Number: 2022332400005801
LIMS Number: 2022-SFL7-04530

Observations, Results and Conclusions:

Exhibit	Substance(s) Identified	Net Weight	Substance Purity	Amount Pure Substance
1	Methamphetamine Hydrochloride	86.5 g ± 0.2 g	100% ± 6%	86.5 g ± 5.2 g

Remarks:

The net weight was determined by direct weighing of all units. The net weight uncertainty value represents an expanded uncertainty estimate at the 95% level of confidence.

Purity determined from testing the composite; the purity and amount pure substance values are representative of the entire exhibit. All uncertainty values represent expanded uncertainty estimates at the 95% level of confidence.

Exhibit Details:

Date Accepted by Laboratory: 09/07/2022 Gross Weight: 106.4 g Date Received by Examiner: 09/20/2022

Exhibit	No. Units	Pkg. (Inner)	Form	Reserve Wt.
1	1	Ziplock Plastic Bag	Crystalline	86.4 g

Remarks:

Exhibit Analysis:

Sampling:

A composite was formed from 1 unit for testing of 1 unit received. Methamphetamine identified in the composite. Salt form determined from testing the composite.

Exhibit Summary of Test(s)

1 Gas Chromatography/Mass Spectrometry, Infrared Spectroscopy

Exhibit Purity Test(s)

1 DEA 503/UV-Vis Spectroscopy

The terminology used in the preparation of this report is consistent with the current Department of Justice Uniform Language for Testimony and Reports for General Forensic Chemistry and Seized Drug Examinations.

Analyzed By: /S/ Brittany C. Huntington, Senior Forensic Chemist

Date: 09/23/2022

Approved By: /S/ Steven-Ray Q. Wing, Forensic Chemist

Date: 09/28/2022

Case Details Report» I.A. Case #: **REDACTED** / LIMS Case #: **2022-SFL7-04530****Investigating Agency: HSI - Kalispell****# of I.A. Exhibits: 1****# of Lab Exhibits: 1**

Exhibit #	Lab Ex #	Lab Exhibit Description	Container
1	1	One plastic zip-lock bag containing white crystalline material.	SSEE (2162346)

Summary of Findings Analyst: BCHUNTINGTON (2022.09.23)**Findings**

Exhibit	Gross Wt	Net Wt (Reported)	Net Wt	Reserve Wt	Retained Wt
1	106.4 g	86.5 g ± 0.2 g	86.56 g ± 0.24061 g	86.4 g	
Constituent	Purity	APD (Reported)	APD		
Methamphetamine Hydrochloride	100% ± 6%	86.5 g ± 5.2 g	86.5 g ± 5.24204 g		

Gross Weight

Analyst: BCHUNTINGTON (2022.09.23)

Equipment : DEA 365185

Gross Weight (Reported)	105.5 g
Gross Weight (Actual)	106.43 g
Gross Weight (delta)	0.93 g
Gross Weight (delta %)	0.874 %
Weight Discrepancy	No
Remarks	No Remarks

Description of Evidence

Analyst: BCHUNTINGTON (2022.09.23)

Seals	Intact
Date Opened	2022-09-20
Description	One self-sealed evidence envelope containing one plastic zip-lock bag containing white crystalline material.
Consistent With Paperwork?	Yes
Remarks	No Remarks

Description of Exhibit and Sampling

Analyst: BCHUNTINGTON (2022.09.23)

Number of Packages	1 unit
Number of Units	1 unit
Package Type	Ziplock Plastic Bag
Logo/Impression	No
Gross Form	Crystalline
Dry/Moist	Dry
Exemplar	No
Number of Units Tested	1 unit
Sampling Procedure	Incremental sampling used to form the composite (15 >1g samples taken from the unit), which was passed through a 20-mesh sieve. All analyses conducted on the composite.
Deviation from Sampling Plan	No
Remarks	No Remarks

Exhibit #	Lab Ex #	Lab Exhibit Description	Container
1	1	One plastic zip-lock bag containing white crystalline material.	SSEE (2162346)

Net Weight		Analyst: BCHUNTINGTON (2022.09.23)
Equipment : DEA 365185		
Residue	No	
Type of Weighing	Direct Weighing	
Net Weight	86.5 g	
Net Weight Uncertainty	0.2 g	
Remarks	Two new lab bags, empty to full.	
Use Legacy Calculator	No	

FTIR Analysis : Run # 1 - Set # 1 Background/blank		Analyst: BCHUNTINGTON (2022.09.23)
Equipment : DEA 365363		
Negative Control Run	Yes	
Background	Pass	
Negative Control Type	Instrumental	
Negative Control Result	Pass	
Remarks	No Remarks	

FTIR Analysis : Run # 1 - Set # 2 Composite/standard		Analyst: BCHUNTINGTON (2022.09.23)
Equipment : DEA 365363		
Negative Control Run	No	
Sample Prep	Direct attenuated total reflectance (ATR).	
Remarks	No Remarks	

Spectral Result	
Constituent	Comments
Methamphetamine Hydrochloride, Isomer	---
Undetermined	

GC-MS Analysis : Run # 1 - Set # 1 Blank		Analyst: BCHUNTINGTON (2022.09.23)
Equipment : DEA 365397		
Negative Control Run	Yes	
Negative Control Type	Instrumental/Solvent	
Negative Control Result	Pass	
Solvent	MeCl2 base extracted (BE) with Na2CO3.	
Remarks	No Remarks	

GC-MS Analysis : Run # 1 - Set # 2 Composite		Analyst: BCHUNTINGTON (2022.09.23)
Equipment : DEA 365397		
Negative Control Run	No	
Sample Weighed	No	
Solvent	BE (Na2CO3) into MeCl2.	
Retention Time Matching	No	
Remarks	Baseline ok.	

Spectral Result	
Constituent	Comments
Methamphetamine, Isomer & Salt Undetermined	Retention time within 0.1 minutes of reference material.

Exhibit #	Lab Ex #	Lab Exhibit Description	Container
1	1	One plastic zip-lock bag containing white crystalline material.	SSEE (2162346)

GC-MS Analysis : Run # 1 - Set # 3 Standard		Analyst: BCHUNTINGTON (2022.09.23)
Equipment : DEA 365397		
Negative Control Run	No	
Sample Weighed	No	
Solvent	MeCl2	
Retention Time Matching	No	
Remarks	No Remarks	

Spectral Result	
Constituent	Comments
Methamphetamine, Isomer & Salt Undetermined	---

Quantitation : Run # 1 - Set # 1 Blank		Analyst: BCHUNTINGTON (2022.09.23)
Equipment : DEA 365207, DEA 365422		
Type	Blank	
Method	DEA 503/UV-Vis Spectroscopy	
Remarks	No Remarks	
QC Low Result	N/A	
QC High Result	N/A	

Quantitation : Run # 1 - Set # 2 Composite		Analyst: BCHUNTINGTON (2022.09.23)
Equipment : DEA 365207, DEA 365422		
Type	Sample	
Method	DEA 503/UV-Vis Spectroscopy	
Dilution Technique	Volumetric	
Sample Prep - Sample Weight (LabX)	138.5 mg	
Sample Amount (Instrument)	138.5 mg	
Sample Prep - Initial Volume	50 mL	
Sample Prep - Volume Transferred	50 mL	
Sample Prep - Final Volume	50 mL	
Sample Prep - Dilution Factor	50 mL	
Dilution Factor	50 mL	
Remarks	No Remarks	

Quantitation					
Constituent	RT	Area	Height	Width	Purity
Methamphetamine, Isomer & Salt		0.0000	0.0000	0.000	101.050
Undetermined					
QC Low Result	102.04				
QC High Result	103.39				

Reserve Weight		Analyst: BCHUNTINGTON (2022.09.23)
Equipment : DEA 365185		
Residue?	No	
Type of Calculation	No Calculation	
Reserve Weight	86.4 g	
Remarks	Two lab bags, full with previous empty weighing.	

Exhibit #	Lab Ex #	Lab Exhibit Description	Container
1	1	One plastic zip-lock bag containing white crystalline material.	SSEE (2162346)

Description of Reserve Evidence

Analyst: BCHUNTINGTON (2022.09.23)

Description	The original packaging, the composite, and the rest of the reserve were each sealed into their own new labeled zip-lock bag. All three of these were heat-sealed into the original evidence envelope (labeled).
Date Sealed	2022-09-23
Remarks	No Remarks

Gross Weight After Analysis

Analyst: BCHUNTINGTON (2022.09.23)

Equipment : DEA 365185

Gross Weight After Analysis	120.23 g
Remarks	No Remarks



**U.S. Department of Justice
Drug Enforcement Administration**

Western Laboratory
Pleasanton, CA

Chemical Analysis Report

HSI - Kalispell
2 Main Street, Suite 206
Kalispell, MT 59901

Case Number: 2022332400005801
LIMS Number: 2022-SFL7-04531

Observations, Results and Conclusions:

Exhibit	Substance(s) Identified	Net Weight	Substance Purity	Amount Pure Substance
2	N-Phenyl-N-[1-(2-phenylethyl)-4-piperidinyl]propanamide (Fentanyl) (calc. as Hydrochloride)	103.333 g ± 0.003 g	2.6% ± 0.6%	2.686 g ± 0.651 g
2	Acetaminophen		----	----

Remarks:

The net weight was determined by direct weighing of all units. The net weight uncertainty value represents an expanded uncertainty estimate at the 95% level of confidence.

Purity determined from testing the composite; the purity and amount pure substance values are representative of the entire exhibit. All uncertainty values represent expanded uncertainty estimates at the 95% level of confidence.

Total dosage unit count = 975 tablets (net); 912 tablets (reserve); fentanyl (as hydrochloride) concentration: 2.7 mg/tablet.

Exhibit Details:

Date Accepted by Laboratory:	09/07/2022	Gross Weight:	118.3 g	Date Received by Examiner:	11/15/2022
Exhibit	No. Units	Pkg. (Inner)	Form	Reserve Wt.	
2	975	Plastic Bag	Tablet	96.691 g	

Remarks:

5.3 grams removed for special program.

Exhibit Analysis:

Sampling:

Fentanyl identified in 9 units tested of 975 units received indicating, to at least a 95% level of confidence, that at least 70% of the units in the population contain the substance. A composite was formed from 30 units for further testing. Acetaminophen also identified in the exhibit.

Exhibit **Summary of Test(s)**

2 Gas Chromatography/Mass Spectrometry, Immunoassay Test

Exhibit **Purity Test(s)**

2 DEA127/Gas Chromatography

The terminology used in the preparation of this report is consistent with the current Department of Justice Uniform Language for Testimony and Reports for General Forensic Chemistry and Seized Drug Examinations.

Analyzed By: /S/ Brittany C. Huntington, Senior Forensic Chemist

Date: 11/21/2022

Approved By: /S/ Paul S. Kusko, Supervisory Chemist

Date: 11/22/2022

Case Details Report» I.A. Case #: **REDACTED** / LIMS Case #: **2022-SFL7-04531****Investigating Agency: HSI - Kalispell****# of I.A. Exhibits: 1****# of Lab Exhibits: 2**

Exhibit #	Lab Ex #	Lab Exhibit Description	Container
2	2	One knotted plastic bag containing many round blue and green tablets.	SSEE (2162348)

Summary of Findings	Analyst: BCHUNTINGTON (2022.11.21)
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Findings		Gross Wt	Net Wt (Reported)	Net Wt	Reserve Wt	Retained Wt
Exhibit	Constituent	Purity	APD (Reported)	APD		
2	N-Phenyl-N-[1-(2-phenylethyl)-4-piperidinyl]propanamide (Fentanyl) (calc. as Hydrochloride)	118.3 g	103.333 g ± 0.003 g	103.333 g ± 0.00252 g	96.691 g	
	Acetaminophen					

Gross Weight	Analyst: BCHUNTINGTON (2022.11.21)
Equipment : DEA 365204	
Gross Weight (Reported)	117.5 g
Gross Weight (Actual)	118.3 g
Gross Weight (delta)	0.8 g
Gross Weight (delta %)	0.68 %
Weight Discrepancy	No
Remarks	No Remarks

Description of Evidence	Analyst: BCHUNTINGTON (2022.11.21)
Seals	Intact
Date Opened	2022-11-18
Description	One self-sealed evidence envelope containing one plastic zip-lock bag containing one knotted colorless plastic bag containing many round blue and green tablets, each imprinted with "M" in a box on one side and "30" over a score on the other.
Consistent With Paperwork?	Yes
Remarks	No Remarks

Exhibit #	Lab Ex #	Lab Exhibit Description	Container
2	2	One knotted plastic bag containing many round blue and green tablets.	SSEE (2162348)

Description of Exhibit and Sampling		Analyst: BCHUNTINGTON (2022.11.21)
Number of Packages	1 unit	
Number of Units	975 unit	
Package Type	Plastic Bag	
Logo/Impression	No	
Gross Form	Tablet	
Top Logo	M	
Bottom Logo	30	
Tablet Shape	Round	
Tablet Color	Blue-Green	
Dry/Moist	Dry	
Exemplar	No	
Number of Units Tested	9 unit	
Sampling Procedure	9 tablets randomly selected (using Lottery method A) and screened by GC-MS and immunoassay. A composite was formed from 30 tablets for further analysis (using the remnants of the previously 9 selected plus 21 more using Lottery method A), which was ground and passed through a 60-mesh sieve.	
Deviation from Sampling Plan	No	
Remarks	No Remarks	

Net Weight		Analyst: BCHUNTINGTON (2022.11.21)
Equipment : DEA 365207		
Residue	No	
Type of Weighing	Unit Count Extrapolation	
Net Weight	103.333 g	
Net Weight Uncertainty	0.003 g	
Total Unit Count	975	
Average Net Weight per Unit	0.10597 g	
Remarks	Two new lab bags, empty to full.	
Use Legacy Calculator	No	

GC-MS Analysis : Run # 1 - Set # 1 Blank		Analyst: BCHUNTINGTON (2022.11.21)
Equipment : DEA 365395		
Negative Control Run	Yes	
Negative Control Type	Instrumental/Solvent	
Negative Control Result	Pass	
Solvent	MeCl2 base extracted (BE) with NaHCO3.	
Remarks	No Remarks	

Exhibit #	Lab Ex #	Lab Exhibit Description	Container
2	2	One knotted plastic bag containing many round blue and green tablets.	SSEE (2162348)

GC-MS Analysis : Run # 1 - Set # 2 Tablet 1		Analyst: BCHUNTINGTON (2022.11.21)
Equipment : DEA 365395		
Negative Control Run	No	
Sample Weighed	No	
Solvent	~1/2 tablet BE (NaHCO3) into ~1mL MeCl2.	
Retention Time Matching	No	
Remarks	Tablet material and manufacturing by-products observed. Baseline ok.	

Spectral Result	
Constituent	Comments
Acetaminophen	Retention time within 0.1 minutes of reference material.
Dipyrone	Indicated; not pursued.
N-Phenyl-N-[1-(2-phenylethyl)-4-piperidinyl]propanamide (Fentanyl), Salt	Retention time within 0.1 minutes of reference material.
Undetermined	

GC-MS Analysis : Run # 1 - Set # 3 Tablet 2		Analyst: BCHUNTINGTON (2022.11.21)
Equipment : DEA 365395		
Negative Control Run	No	
Sample Weighed	No	
Solvent	~1/2 tablet BE (NaHCO3) into ~1mL MeCl2.	
Retention Time Matching	No	
Remarks	Tablet material and manufacturing by-products observed. Baseline ok.	

Spectral Result	
Constituent	Comments
N-Phenyl-N-[1-(2-phenylethyl)-4-piperidinyl]propanamide (Fentanyl), Salt	Retention time within 0.1 minutes of reference material.
Undetermined	

GC-MS Analysis : Run # 1 - Set # 4 Tablet 3		Analyst: BCHUNTINGTON (2022.11.21)
Equipment : DEA 365395		
Negative Control Run	No	
Sample Weighed	No	
Solvent	~1/2 tablet BE (NaHCO3) into ~1mL MeCl2.	
Retention Time Matching	No	
Remarks	Tablet material and manufacturing by-products observed. Baseline ok.	

Spectral Result	
Constituent	Comments
N-Phenyl-N-[1-(2-phenylethyl)-4-piperidinyl]propanamide (Fentanyl), Salt	Retention time within 0.1 minutes of reference material.
Undetermined	

Exhibit #	Lab Ex #	Lab Exhibit Description	Container
2	2	One knotted plastic bag containing many round blue and green tablets.	SSEE (2162348)

GC-MS Analysis : Run # 1 - Set # 5 Tablet 4		Analyst: BCHUNTINGTON (2022.11.21)
Equipment : DEA 365395		
Negative Control Run	No	
Sample Weighed	No	
Solvent	~1/2 tablet BE (NaHCO3) into ~1mL MeCl2.	
Retention Time Matching	No	
Remarks	Tablet material and manufacturing by-products observed. Baseline ok.	

Spectral Result	
Constituent	Comments
N-Phenyl-N-[1-(2-phenylethyl)	Retention time within 0.1 minutes of reference material.
-4-piperidinyl]propanamide (Fentanyl), Salt	
Undetermined	

GC-MS Analysis : Run # 1 - Set # 6 Tablet 5		Analyst: BCHUNTINGTON (2022.11.21)
Equipment : DEA 365395		
Negative Control Run	No	
Sample Weighed	No	
Solvent	~1/2 tablet BE (NaHCO3) into ~1mL MeCl2.	
Retention Time Matching	No	
Remarks	Tablet material and manufacturing by-products observed. Baseline ok.	

Spectral Result	
Constituent	Comments
N-Phenyl-N-[1-(2-phenylethyl)	Retention time within 0.1 minutes of reference material.
-4-piperidinyl]propanamide (Fentanyl), Salt	
Undetermined	

GC-MS Analysis : Run # 1 - Set # 7 Tablet 6		Analyst: BCHUNTINGTON (2022.11.21)
Equipment : DEA 365395		
Negative Control Run	No	
Sample Weighed	No	
Solvent	~1/2 tablet BE (NaHCO3) into ~1mL MeCl2.	
Retention Time Matching	No	
Remarks	Tablet material and manufacturing by-products observed. Baseline ok.	

Spectral Result	
Constituent	Comments
N-Phenyl-N-[1-(2-phenylethyl)	Retention time within 0.1 minutes of reference material.
-4-piperidinyl]propanamide (Fentanyl), Salt	
Undetermined	

Exhibit #	Lab Ex #	Lab Exhibit Description	Container
2	2	One knotted plastic bag containing many round blue and green tablets.	SSEE (2162348)

GC-MS Analysis : Run # 1 - Set # 8 Tablet 7		Analyst: BCHUNTINGTON (2022.11.21)
Equipment : DEA 365395		
Negative Control Run	No	
Sample Weighed	No	
Solvent	~1/2 tablet BE (NaHCO3) into ~1mL MeCl2.	
Retention Time Matching	No	
Remarks	Tablet material and manufacturing by-products observed. Baseline ok.	

Spectral Result	
Constituent	Comments
N-Phenyl-N-[1-(2-phenylethyl)	Retention time within 0.1 minutes of reference material.
-4-piperidinyl]propanamide (Fentanyl), Salt	
Undetermined	

GC-MS Analysis : Run # 1 - Set # 9 Tablet 8		Analyst: BCHUNTINGTON (2022.11.21)
Equipment : DEA 365395		
Negative Control Run	No	
Sample Weighed	No	
Solvent	~1/2 tablet BE (NaHCO3) into ~1mL MeCl2.	
Retention Time Matching	No	
Remarks	Tablet material and manufacturing by-products observed. Baseline ok.	

Spectral Result	
Constituent	Comments
N-Phenyl-N-[1-(2-phenylethyl)	Retention time within 0.1 minutes of reference material.
-4-piperidinyl]propanamide (Fentanyl), Salt	
Undetermined	

GC-MS Analysis : Run # 1 - Set # 10 Tablet 9		Analyst: BCHUNTINGTON (2022.11.21)
Equipment : DEA 365395		
Negative Control Run	No	
Sample Weighed	No	
Solvent	~1/2 tablet BE (NaHCO3) into ~1mL MeCl2.	
Retention Time Matching	No	
Remarks	Tablet material and manufacturing by-products observed. Baseline ok.	

Spectral Result	
Constituent	Comments
N-Phenyl-N-[1-(2-phenylethyl)	Retention time within 0.1 minutes of reference material.
-4-piperidinyl]propanamide (Fentanyl), Salt	
Undetermined	

Exhibit #	Lab Ex #	Lab Exhibit Description	Container
2	2	One knotted plastic bag containing many round blue and green tablets.	SSEE (2162348)

GC-MS Analysis : Run # 1 - Set # 11 Standard		Analyst: BCHUNTINGTON (2022.11.21)
Equipment : DEA 365395		
Negative Control Run	No	
Sample Weighed	No	
Solvent	9:1 ratio of MeCl2:MeOH (9:1)	
Retention Time Matching	No	
Remarks	No Remarks	

Spectral Result	
Constituent	Comments
Acetaminophen	---
N-Phenyl-N-[1-(2-phenylethyl)-4-piperidinyl]propanamide (Fentanyl), Salt	---
Undetermined	

Immunoassay Test : Run # 1 - Set # 1 Blank		Analyst: BCHUNTINGTON (2022.11.21)
Negative Control Run	Yes	
Negative Control Result	Pass	
Immunoassay Type	Fentanyl Immunoassay Test Strips	
Lot Number	B2205033	
Remarks	Expires 05-22-2024.	

Immunoassay Test : Run # 1 - Set # 2 Tablets 1-9		Analyst: BCHUNTINGTON (2022.11.21)
Negative Control Run	No	
Immunoassay Type	Fentanyl Immunoassay Test Strips	
Lot Number	B2205033	
Applicable Units	1-9	
Result	Positive	
Remarks	Expires 05-22-2024.	

Immunoassay Test : Run # 1 - Set # 3 Standard		Analyst: BCHUNTINGTON (2022.11.21)
Negative Control Run	No	
Immunoassay Type	Fentanyl Immunoassay Test Strips	
Lot Number	B2205033	
Applicable Units	Fentanyl standard 498.	
Result	Positive	
Remarks	Expires 05-22-2024.	

Exhibit #	Lab Ex #	Lab Exhibit Description	Container
2	2	One knotted plastic bag containing many round blue and green tablets.	SSEE (2162348)

Quantitation : Run # 1 - Set # 1 Standard	Analyst: BCHUNTINGTON (2022.11.21)
Equipment : DEA 365207, DEA 365388	

Type	Standard
Method	DEA127/Gas Chromatography
Dilution Technique	N/A
Sample Amount (Instrument)	1.0012 mg
Dilution Factor	1 mL
Remarks	No Remarks

Quantitation					
Constituent					
Tetracosane	RT	Area	Height	Width	Purity
Tetracosane	1.997	114.1004	117.9160	0.015	39.982
Fentanyl	3.361	228.1710	221.7689	0.016	100.000

Quantitation : Run # 1 - Set # 2 QC low	Analyst: BCHUNTINGTON (2022.11.21)
Equipment : DEA 365207, DEA 365388	

Type	Check
Method	DEA127/Gas Chromatography
Dilution Technique	N/A
Sample Amount (Instrument)	5.6008 mg
Dilution Factor	1 mL
Remarks	No Remarks

Quantitation					
Constituent					
Tetracosane	RT	Area	Height	Width	Purity
Tetracosane	1.997	120.5117	121.5218	0.016	7.147
Fentanyl	3.354	91.1975	89.8158	0.016	6.765

Quantitation : Run # 1 - Set # 3 Blank	Analyst: BCHUNTINGTON (2022.11.21)
Equipment : DEA 365207, DEA 365388	

Type	Blank
Method	DEA127/Gas Chromatography
Remarks	No Remarks

Quantitation					
Constituent					
Fentanyl	RT	Area	Height	Width	Purity
Fentanyl	0.000	0.0000	0.0000	0.000	0.000
Tetracosane	1.995	113.7825	115.0990	0.016	0.400

Exhibit #	Lab Ex #	Lab Exhibit Description	Container
2	2	One knotted plastic bag containing many round blue and green tablets.	SSEE (2162348)

Quantitation : Run # 1 - Set # 4 Composite	Analyst: BCHUNTINGTON (2022.11.21)
Equipment : DEA 365207, DEA 365388	

Type	Sample
Method	DEA127/Gas Chromatography
Dilution Technique	Volumetric
Sample Prep - Sample Weight (LabX)	506.3 mg
Sample Amount (Instrument)	506.3 mg
Sample Prep - Initial Volume	10 mL
Sample Prep - Volume Transferred	10 mL
Sample Prep - Final Volume	10 mL
Sample Prep - Dilution Factor	10 mL
Dilution Factor	10 mL
Remarks	Amount substance per tablet = average weight of tablet x final purity = 105.97 mg x 2.6% = 2.7 mg/tablet.

Quantitation					
Constituent	RT	Area	Height	Width	Purity
Tetracosane	1.997	108.9274	109.1202	0.015	0.791
Tetracosane	1.997	109.0817	109.3735	0.015	0.791
Fentanyl	3.365	295.7726	267.2876	0.018	2.685
Fentanyl	3.365	296.1742	275.8600	0.016	2.685

Quantitation : Run # 1 - Set # 5 QC high	Analyst: BCHUNTINGTON (2022.11.21)
Equipment : DEA 365207, DEA 365388	

Type	Check
Method	DEA127/Gas Chromatography
Dilution Technique	N/A
Sample Amount (Instrument)	20.0028 mg
Dilution Factor	1 mL
Remarks	No Remarks

Quantitation					
Constituent	RT	Area	Height	Width	Purity
Tetracosane	1.997	118.3787	120.3376	0.015	2.001
Fentanyl	3.365	334.0833	313.5901	0.015	7.064

Exemplar Weight Removed	Analyst: BCHUNTINGTON (2022.11.21)
Amount of Exemplar Removed	5.3928 g
Remarks	No Remarks

Reserve Weight	Analyst: BCHUNTINGTON (2022.11.21)
Equipment : DEA 365207	
Residue?	No
Type of Calculation	Calculate Dosage Unit
Reserve Weight	96.6917 g
Reserve Dosage Units	912.4 unit
Remarks	Two lab bags, full with previous empty weighing.

Exhibit #	Lab Ex #	Lab Exhibit Description	Container
2	2	One knotted plastic bag containing many round blue and green tablets.	SSEE (2162348)

Description of Reserve Evidence		Analyst: BCHUNTINGTON (2022.11.21)
Description	The original packaging, the composite, and the reserve tablets were each sealed into their own new labeled zip-lock bag. The composite and reserve bags were further sealed into one new labeled HSEE. Both of these bags were heat-sealed into the original evidence envelope (labeled).	
Date Sealed	2022-11-21	
Remarks	No Remarks	

Gross Weight After Analysis		Analyst: BCHUNTINGTON (2022.11.21)
Equipment : DEA 365204		
Gross Weight After Analysis	126.4 g	
Remarks	No Remarks	

Exhibit #	Lab Ex #	Lab Exhibit Description	Container
2	2	FPP.	SSEE (2207502)

Other SP Sample Weight Analyst: BCHUNTINGTON (2022.11.21)**Equipment : DEA 365207**

Number of Samples	1
Other SP Total Sample Weight	5.3928 g
Other SP Average Sample Weight	5.3928 g
Remarks	No Remarks

Description of Reserve Evidence Analyst: BCHUNTINGTON (2022.11.21)

Description	50 round blue-green tablets were sealed into one new labeled vial, which was sealed with parafilm and further sealed into one new labeled plastic bottle, which was sealed into one new SSEE (labeled).
Date Sealed	2022-11-21
Remarks	No Remarks

Gross Weight - SP/LP Analyst: BCHUNTINGTON (2022.11.21)**Equipment : DEA 365204**

Gross Weight	73.3 g
Remarks	No Remarks